

APPLICATION OF MULTIVARIATE TOOLS IN ESTABLISHING RELATIONS BETWEEN CARDIOVASCULAR HEALTH AND PHYSICAL ACTIVITY BASED ON A SURVEY

Jasenka Gajdoš Kljusurić^{1*}, Marija Čačić², Jasna Čačić³

¹Faculty of Food Technology and Biotechnology, University of Zagreb, Pierottijeva 6, 10000 Zagreb, Croatia

²School of Medicine, University of Zagreb, Šalata 3, 10000 Zagreb, Croatia

³Croatian Association of Drink Producers, Kučerina 64, 10000 Zagreb, Croatia

*e-mail: jgajdos@pbf.hr

Abstract

Proper diet that provides optimal ratio of nutrients, in particular fat and salt is one of the prerequisites for reducing the risk of cardiovascular diseases. The benefits of all forms of exercise are numerous and aerobic activities have a positive effect on the cardiovascular system. A pilot survey was conducted among the working populations of both genders to collect answers that could indicate their behavior regarding cardiovascular health. The aim of this study was to determine the attitudes of the respondents about the impact of proper nutrition and exercise on the cardiovascular system, and determine the level of awareness of respondents about potential links between the nutrition and cardiovascular health.

To determine the attitude of the respondents a validated questionnaire was used. In a large set of parameters that interact with each other, the multivariate analysis was applied. Principal component analysis was used to determine the similarities and differences of attitudes regarding the exercise and cardiovascular health.

The results are encouraging, showing that respondents are almost fully aware of the impact of proper nutrition (96%) and exercise (98%) on cardiovascular health. They point out the negative effect of fast food (86%), fat (34%), carbohydrates (24%) and salt (22%). According to the results of the research, physical activity can affect the good cholesterol and triglyceride levels (96% and 92%) and the blood pressure reduction (96%). The results show that those that are engaged in physical activity (at least moderately) have an attitude that aligns them to the critical population, because their eating knowledge or preferences are not in accordance with the food that should be consumed to prevent cardiovascular diseases.

Therefore, they should be classified in a group that in the future could have a significantly higher risk of cardiovascular disease.

Key words: *Cardiovascular health, Physical activity, Survey, Multivariate analysis.*